

Degree Project for Bachelor of Fine Arts in Design
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Abstract

This project investigates what human interaction is and how we collaborate within the confines of finite resources. The project examines what could be done to minimise the need of ownership and instead reconnect the human to the collective by encouraging sharing. The method used to achieve this will be an in-depth design process.

The investigation is conducted from the stand point of a Swedish apartment house. Discussions are based around the problem of how to create a sense of community to encourage people to share their daily lives with each other, including their products and services.

The proposed solution is a design that sparks the initiation of communication between neighbours, slowly encouraging a sense of community belonging within their shared apartment house.

Introduction

The idea for this project started with the interest of exploring inter-human connection. It has become apparent over recent years that the social structure of society has changed from family and community reliance to personal independence (Harari 2015; Strang 2014; Turkle 2012). Humanity has moved from valuing the collective to valuing the individual.

Throughout history, humans have been dependent on collaboration with other humans to survive. This has therefore developed specific behaviours that strengthens the collective, such as playfulness and the need to socialise. The intention of this process is to create an applicable solution that can be implemented into today's society to reverse this negative change and encourage the benefits of collective collaboration.

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Background

Today there are a number of reports and studies which show that individuals feel as though they are becoming lonelier (Heid 2015). This insight drives the reflection of the consequences when individuals are not dependent of one another within communities. The world value survey, complies information about culture and values and determines how those can affect societies and countries. The graph from 2017 "the cultural value map" (figure 1) shows Sweden as the most self-expressed and secular-rational valued country (World values survey, 2017). This means people in Sweden generally value a liberal way of thinking and that the citizens have trust in the institutions.

Generally, individuals in the western world have for the last century valued an individualistic worldview (Wollaston 2015). One of the objectives of this design project is to investigate what happens when we reconnect to the collective through collaboration and the sharing of products and services. Another important purpose of this study is to identify if the feeling of loneliness that has risen in society could be counteracted. This shall be guided through an exploration into whether individuals are willing to share products to not only lessen our impact on the environment but at the same time bring people together.

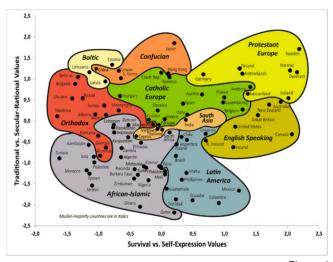


Figure 1

Project description

To promote meaningful human communication there needs to be a reason, or a trigger, that acts as a catalyst for the interaction. Through history, interaction with others has been required to manage daily life and survive, but with recent technologies, innovations and efficiencies individuals have less opportunities for spontaneous interactions. The challenge of the chosen topic is to pin-down a substantial social issue in order to come up with a tangible solution.

The main goal of the undertaking is to promote social interaction through shared property or service. The expectation is that the product or service that is created will find an easier way for people to spontaneously meet and socialize over common grounds. It is hoped that a by-product of this is the questioning of ownership vs mutual possession.

"To design a product or service intended for shared use which encourages human interaction."

Project Plan

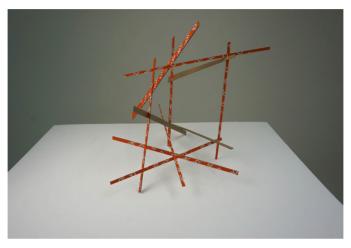
Week	Monday	Tuesday	Wednesday	Thursday	Friday	Comments	Weekly plan
							Define project motivation and
					10.00-18.30		background and do a time plan.
						Presentation of: Project	
					08.00-16.00	description// Procedure//	
3	08.00-17.00	08.00-17.00	08.00-17.00	08.00-17.00	16.00-17.00*	Timeplan//	Project description/ Research
					08.00-16.00		
4	08.00-17.00	08.00-17.00	08.00-17.00	08.00-17.00	16.00-17.00*		Research
					08.00-16.00		
5	08.00-17.00	08.00-17.00	08.00-17.00	08.00-17.00	16.00-17.00*		Research / Synthesis
					08.00-16.00		Synthesis / 1st Ideation
6	08.00-17.00	08.00-17.00			16.00-17.00*		(concepts)
	00.00 17.00	00.00 17.00			10.00 17.00		Сопсерь
					08.00-16.00		
7		08.00-17.00			16.00-17.00*		1st Ideation /Evaluation
					08.00-16.00		
8		08.00-17.00	13.00-17.00		16.00-17.00*		1st Ideation / 2nd Ideation
					08.00-16.00		2st Ideation (refinement of
9		08.00-17.00			16.00-17.00*		choosen concepts)
					08.00-16.00		
10		08.00-17.00			16.00-17.00*		2st Ideation /Evaluation
					08.00-16.00		2nd Ideation finalizing of final
11	08.00-17.00	08.00-17.00	08.00-12.00	08.00-17.00	16.00-17.00*		product concept
					08.00-16.00		Prototyping of final concept and
12	13.00-17.00	08.00-17.00	13.00-17.00	13.00-17.00	16.00-17.00*		final evaluation
42							
13							
					08.00-16.00		
14		08.00-17.00	08.00-17.00		16.00-17.00*		Realisation
					08.00-16.00		
15	13.00-17.00		08.00-17.00	13.00-17.00	16.00-17.00*		Realisation
					00.00.16.00		
16	13.00-17.00	08.00-17.00	08.00-17.00	13.00-17.00	08.00-16.00 16.00-17.00*		Realisation
10	13.00-17.00	00.00-17.00	00.00-17.00	13.00-17.00	10.00-17.00		ncanacton
					08.00-16.00		
17	08.00-17.00	08.00-17.00	08.00-17.00	08.00-17.00	16.00-17.00*		Presentation
							*Documenation

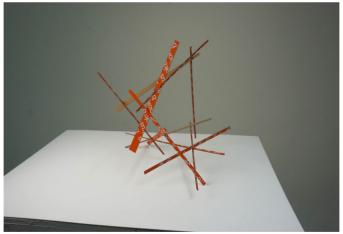
Time management is an important aspect in a project of this nature, therefore a project plan has been made to organize the workload and to ensure important deadlines are met. An hour each week has been put aside for compiling documentation and results of each week's work.

Research I

Humans and interaction

In the initial research, it was decided that a broad overview was to be taken to understand why human interaction is required. Questions were also asked of what can be achieved through collaboration, how technology has changed interaction and how societies can exist or disappear. This research was conducted to gain a better picture of why changes in behaviour are needed to enable reconnection, and to motivate the next phases of the project.





Extreme isolation, where humans are isolated from other humans, has proven to have devastating effects on the human mind. Effects that extreme isolation can bring include hallucinations, paranoia and the destabilisation of the mental mind (Bond, 2014).

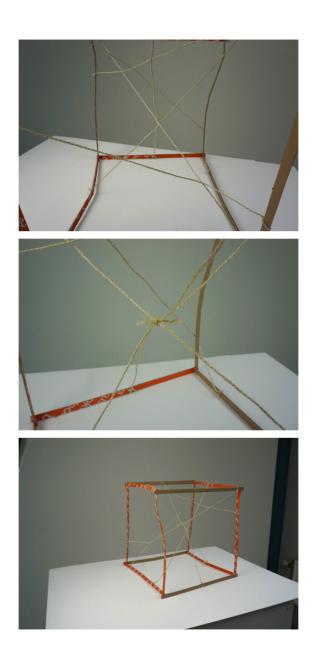
Even moderate isolation from others can have a direct link to health, since human interaction helps to lower blood pressure and prevent diseases (Bond, 2014; Brody, 2017). Human interaction has been considered to be deeply coded in human psychology, and is the first psychological fulfilment needed to tend to our ability to survive, according to Maslow's hierarchy of needs (Figure 2).

Matthew Lieberman, a professor of psychology, argues that social environments form who human beings are and when those bonds are severed it can have a great impact on our health (Lieberman 2013).

This concludes that it is important for humans to have social bonds with others. This connects well to the aim of the project, and gives an opportunity for people to connect by sharing a product or service.



Figure 2



Collaboration

(comunication

"Collective action is usually seen as a reaction to a crisis created by an economically determined structural logic." (Castells, 1983. P. xvi)

To survive, humans have always been dependent on each other, because of this they have learned to master the force of organization in our society.

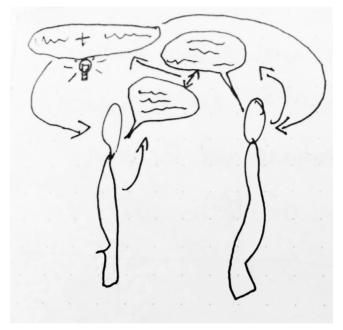
Beliefs of religion, kings and nationalities have often brought people together to create large coalitions and to build societies. Humans generally place trust in the "leading people" to take care of them, protect them, and treat them fairly (Rifkin, 2011).

Ever since organisations have occurred there have been coups, revolutions and reforms. The main reasons for a society to stand up to its structure is injustice in financial, social and political structures and because of cultural changes or new ideas being introduced.

To facilitate an effective change, humans often organise in mass mobilisation. With modern information technologies, the exchange of information and communication takes place much faster than before (Castells, 2012).

Humans have the need to belong and aim to find their way to be a part of the community. This is achieved on a micro-plane by belonging to a community, made up of either family, relatives, neighbours or the local area. They also try to belong to a community on a macro-plane, through belonging to an ethnicity, religion, nationality, or a more temporary identity of social change (Harari, 2015).

Organisation



By interacting and communicating humans can create and form ideas and technology. The skill of collaboration enables a more efficient society.

In every organization, a power play exists with counter powers. If an organization is viewed as unfair, movements takes place through communication and interaction to reform or revolt from the existing system. States can prevent revolts through ensuring their citizens needs are met. The other way to guarantee control is to exercise coercion over the people. This, history has proved, is a more fragile system of retaining power (Castells, 1983).

Organisations, ideologies and movements have previously been dependent on a person or several people to take action, and orchestrate the counter power play towards the existing power. With information being able to change and move quickly, movements can now form from autonomy where pinpointing the leader is more difficult.

With interactions and collaborations, humans create complicated entities such as societies, organisations and technologies. Collaboration has made humans successful, this project therefore aims to re-establish the idea of collaboration by reintroducing a local community.

Societies and revolutions







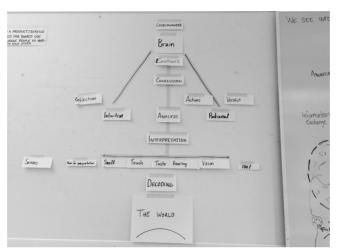
These models visualise societies. On the left side, a stable society where the needs and will of the individuals are meet. On the right side, an unstable society where the individuals are rising up towards the leading organisations and are overthrowing them.

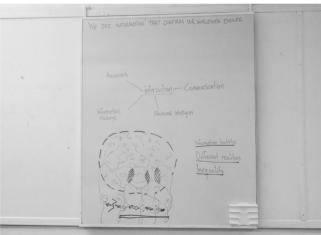






Interactions





With new information technology, we can communicate much faster and over greater distance than before, but one drawback that is clearly visible is that the technology is reducing the possibility of in-person interaction (Connected, but Alone? 2012).

An important factor of interaction and information exchange is emotional intelligence. When humans interact with all senses, they can analyse and react to more than what is conveyed with one sense, e.g. speech, alone. As illustrated in the picture on the top left, all of the senses make an interpretation of the world and when some are disabled through using communication technologies, it can affect human interpretation.

Another problem that humans have is that they find it easier to "absorb" information that confirms their own world view (Kahneman, 2011). This has created polarized worldviews, as communication platforms often show individualised ads and content. This confirms the user's worldview to maintain their consumption of the platforms. This leads to people having misconceptions regarding world views that differ from their own (De Witt 2016).

This phenomenon has been named "information bubbles", and can be a contributing factor to the polarisation of societies. For example a lot of people agree that the latest presidential election in the USA saw a lot of polarised information bubbles, whereby members of opposing groups were unable to identify with each other (Geher 2018).

With this insight, experimentation was conducted into how interaction with more of the senses could be implemented into modern communication tools. Experimentation on how to create spontaneous interaction through the use of an analogue message board, was also completed.

The insight that modern technologies give faulty impressions of people, and are contributing to a polarised society, raises a concern. The project aims to oppose this negative trend by bringing people together, regardless of their worldviews.









Scope of design

Activities

The goal of the design is to visualise the need for humans to collaborate and interact with each other in everyday activities. Downsizing the project proved difficult, therefore it was decided to investigate more specific human activities.

Camping Theatre
Tennis Gardening

Football Markets

Dinner Grocery store

Shopping Climbing
Museum Laundry
Ice-skating Biking

Hockey Cleaning

Ping-Pong

Ballet

Badminton

Judo

Work

It was concluded that activities can be fun, functional or both. Activities that are performed can relate to survival but also must strengthen human bonding. Music, art, poetry, acting and painting are all activities that bond people together in society.

In a globalized world, many unique cultures are becoming more homogenized. Activities that used to bond humans together are not so valued in a globalized world. This realization raised the idea that if this project could help give new value to a cultural tradition it would be a beneficial consequence.



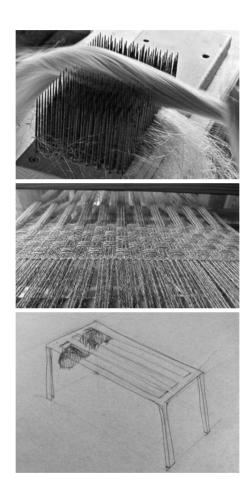
Concept idea

The insight regarding cultural activities acting as a bond between humans raised the idea of integrating such an activity into the project.

An article stated that swedes throw away approximately 1500 tons of wool every year (Cederblad, 2017). Using the knowledge gained from this article, explorations were made to see if a product could utilize the wasted wool and at the same time bond people over a cultural activity.

Following these investigations, a conclusion was made that the direction of the project had diverted from a desirable direction. With this understanding, the project was expanded to find other situations to narrow the scope of the project.





Written scenarios

After exploring the idea of bringing people together over culture, the next step was to write scenarios to visualize an alternative way of narrowing down the project. The scenarios constructed were meant to give ideas of opportunities where sharing could occur. This brainstorming produced a number of possible project directions.

One

Jim and Anna have two kids that enjoy playing on the swing in their garden. Before their parents were able to afford to buy them a swing of their own, they walked 10 mins to the local neighbourhood park to use a communal swing. The distance, and the fact that the park wasn't too inviting, put pressure on Jim and Anna to purchase a swing of As they missed playing with the other children in the park.

Opportunity

Easily accessible playground where both parents and children can have fun spending time and at the same time meet other people.

Two

Cornelia and her friends have a dinner club every Thursday where they get together at her place to talk about the week and eat. For this occasion, Cornelia's kitchen is very small and often needs to be rearranged to fit everybody. Cornelia has to do this before each time her guests arrive.

Opportunity

Easily convertible kitchen appliance to fast provide the necessities of hosting a gathering.

Three

Holmer has a big interest in gardening and has a lot of special tools to keep and maintain his precious plants and trees. He uses the tools to care for the garden until perfection is achieved. However, as he cannot be constantly in his garden, for a large part of the year the tools aren't being used. He affectionally polishes and oils the tools to keep them in perfect condition, because he's longing to use the tools. Holmer also finds that the tools have a beauty of their own. Holmer once lent a pair of secateurs to a neighbour but was horrified of the condition when he received the tool back. He is now uncertain if he wants to lend out the tools again.

Opportunity

Enable situations where people enjoy the use of, but also take care of, communal tools. This can be a way of communicating one person's values to the other person. For instance, as in the scenario that the tools mean a lot to Holmer

Four

Filippa currently sits in an open plan office, but before that she sat in a closed room. She sometimes gets annoyed at the other people sitting around her and also feels as though she has more supervision than before. However, sometimes she gets into conversations that can help her conduct her work. It's hard to signal the difference to her colleagues when it's okay to be interrupted and when it's not.

Opportunity

A way to signalize to colleagues when it's fine to be interrupted in their work and when they wish to not be disturbed.

Five

Filip thinks his school is boring and uninspiring. It's often too loud and chaotic, therefore he doesn't get much of his work done there and prefers to work with his school projects from home. When he encounters a problem he can't solve, he turns to the internet or waits with it until the next time he can ask his teacher. Sometimes he can't solve the problem at all, so he gets stuck and can't continue

Opportunity

An environment where Filip can find peace in order to perform his work in school that pairs Filip together with other students, so they can help each other to solve the problems.

Six

Sara and Hampus do not have a dishwashing machine in their apartment, instead they hand wash all of their dishes, something which they both hate. They usually divide it so that they do it every other day and whilst this is taking place, the other person doesn't know what to do, and so goes to the living room to scroll on his or her phone.

Opportunity

A way for people to perform tedious household chores together so that they become an enjoyable activity.

Seven

Ellen hardly knows her neighbours in the apartment building she lives in. She occasionally meets them in the staircase or the elevator but above that she doesn't have any interaction with them. She doesn't borrow from or ask people for help, instead she relies on other people outside the building to help her out when she is in need.

Opportunity

A way for people to easily and more spontaneously interact with each other in communal apartment buildings, to allow them to get to know their neighbours.

The scenario five and seven had more potential for the project so to make a decision between the two they were refined by further exploring their design parameters.

Design parameters

Scenario 5

Need

An environment where Filip can find peace in order to perform his work in school. This could also pair Filip together with other people so they can help each other to solve their problems.

Why

Health improvement perspective, through interaction with other people

Strengthen Filip's sense of a community

Develop improved human interaction and tolerance within a school environment

What

A product to encourage and facilitate students to assist each other again.

- Encourage physical human interaction
- Meet and socialize over commonalities

How

To design a tool for people in school to find a study environment where they feel safe and where it's easier to rely on each other for help in solving problems creating a community of learning.

Benefit

The benefit of the product will be that students can easily connect and talk about problems with each other whilst sharing a mutual space. A possible advantage is that they learn better together. The shared space creates a platform for establishing better relationships between students. It also becomes easier for the teacher to assist the students more effectively as the students are still in school.

Scenario 7

Need

A way for people to easily and more spontaneously interact with each other in their shared apartment building. To get to know their neighbours and exchange help and expertise from each other.

Why

Health perspective, strengthen the community, develop human interaction in an apartment building.

What

A product to encourage people to be curious about each other again.

- Encourage physical human interaction
- Spontaneously meet and socialize over a common topic

How

In Swedish apartment buildings people don't interact and know their neighbours anymore. A product or service should be designed that encourages and enables people living in the same apartment building to interact with each other, through sharing a common space.

Benefit

The benefit of the product will be that people can more easily start conversations, which may lead to better relationships being built between the people living in the same building. Trust and friendship will create a better platform for developing a communal identity within the building.

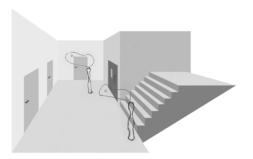






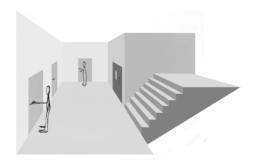
After feedback and revaluation of the chosen direction, it was decided that the second scenario would best fit for this project.

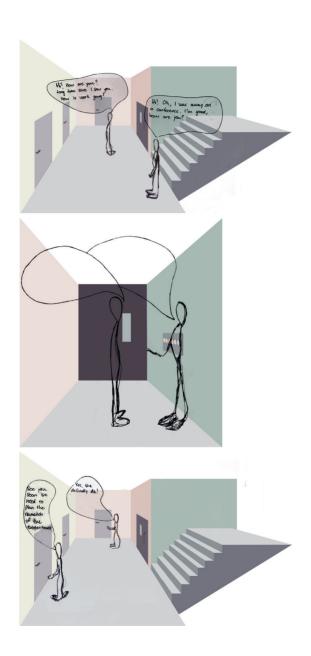
Scenario story



To give a visualisation of what the project should achieve, two scenario stories were created. The first scenario shows a resident building with a non-existent community where no design solution has been put in place. The second scenario is showing a possible interaction between residents in a building that has an established community.







Function analysis

To pin-down the function of the project, a function analysis was made to clarify what the product should achieve. The properties were then graded to declare how important they were.

The main function of the service was defined to be the importance of creating trust between residents. This due to the observation that to create an including environment where people were sharing daily lives with each other the starting point must be to have trust in the neighbors.

The trust between residents could be achieved by sharing an enclosed environment, starting a conversation or sharing services as defined in the function analysis as important functions. However to get a *valuable exchange* between residents, the priority was set to achieve trust as main function. To achieve this the other defined functions from the function analysis were important to enable the main function.

Create trust to each other	MF
Conversation starter	Ν
Sharing an environment	Ν
Create new connections,	
amongst residents	Ν
The beginning of a collective	Ν
A sense of belonging	Ν
Adaptive to inhabitants	Ν
Sharing a service	D
Sharing a tool	D

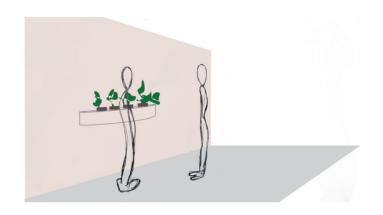
MF - Main function

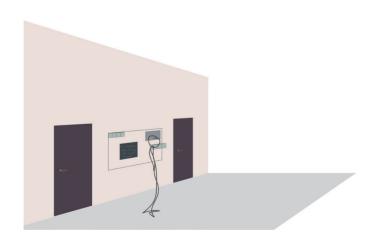
N - Need

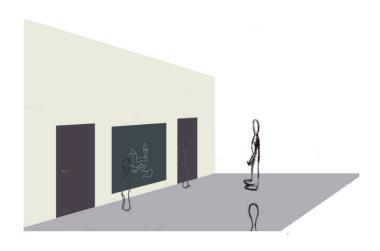
D - Desirable

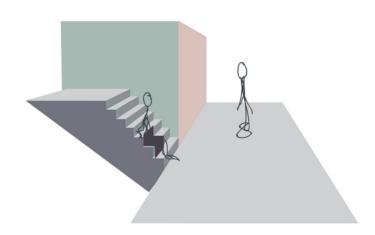
Concept Ideas

With the confirmation of the function analysis results, concepts were visualized to show possible product areas for the final design.









These visualisations were centred around improving or making use of the dead space within the apartment buildings. This turned out to be problematic, as the suggested solutions focused on the apartment house appearance alone. This went against the goal of the brief, which was for the outcome to contribute to the community of the building and enable residents to connect.

After concluding that changing the outer appearances wasn't enough for achieving the projects goal, a second research phase was conducted. This time on the dynamics of apartment houses, to ensure the product would fulfil a purpose for the residents.

Research II

Apartment buildings

In Sweden, there are two different types of apartment buildings, those that only have apartments that are to rent (hyreshus), and those where all apartments are owned by the residents (bostadsrätt). The residents of the apartment buildings share the staircases, foyers, hallways, attics and other storage spaces, plus any inner gardens or laundry rooms if applicable.

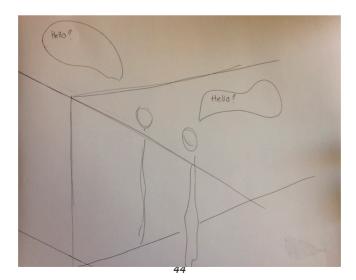
The environment

With the colder climate Sweden experiences, the communal outdoor areas are only spontaneously utilized in the summer time. The other shared areas such as laundry rooms often have strict rules of how to book and utilize the space to maintain civil interactions between residents.

There may be artful decorations in the staircases of some buildings, but they are often impersonal. However, many people utilize the space solely as a pass way to enter their own apartment.

Residents

As part of the research, a critical analysis session was held and when asked, people responded that they often had an idea of who their neighbours were. However few people chose to interact with them. The residents often notice each other's presence when a



problem has occurred e.g. when a resident forgets to clean the laundry room, forgets to make sure the outer door is closed, or is disturbing their neighbours with loud voices or music.

Cecilia Henning, docent in social relations, has researched the connection between neighbours. She concluded that it is important for humans to know neighbours. At the same time, she also points out that a majority of residents don't want too close relationship with their neighbours, in the instance of the relation turning sour (Henning & Lövgren 2002).

MKB, a real estate company based in south Sweden, have noticed the benefits of positive relationships between neighbours. They introduced a campaign in Malmo after noticing that neighbours felt unsafe in their neighbourhoods, which aimed to encourage people to say hello to each other (MKB 2013). The campaign consisted of providing information to the habitants and creating events where they informed residents of the benefits of having good relations with neighbours.

When casually asking people, many responded that they would like to have a relation and knowledge of whom their neighbours are. Unfortunately most people asked replied that they themselves were too afraid to invest too much time in their interaction and relations with their neighbours to get to know them.



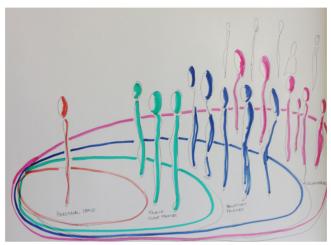
Individualism

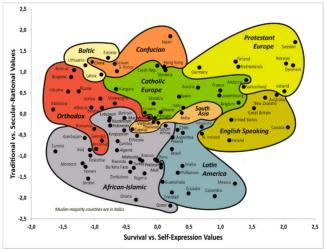
The thought of an individualistic society took its form in the middle of 17th century in England in a response to the industrial revolution. Individualism was later develop by thinkers such as Adam Smith and Jeremy Bentham into what we today regard liberalism (Davies 1995). The new individualistic approach, in combination with the industrial revolution, created a massive shift in the people's ability to take control of their life.

In protestant, Christian countries individualism has prospered the most. The organization World Value survey, is a network consisting of social scientists which compiles information about culture and values to determine effects on societies, countries and economic development. According to them, values and beliefs play a key role in forming the structure for a society. Their data has concluded that Sweden emerges as an extreme country when it comes to having secular rational and self-expressing values (World Values Survey 2015).

The individualistic society in Sweden took its first leaps in the 70's when policies regarding family insurance and children benefits were enforced. This ensured that both parents could work and start a family, which were the first milestone in creating a society where no citizen was dependent on another (Regeringskansliet, 2001). Rather than being dependent on their close community and relatives, swedes became dependent on the state to organise and provide for them in exchange for taxes.

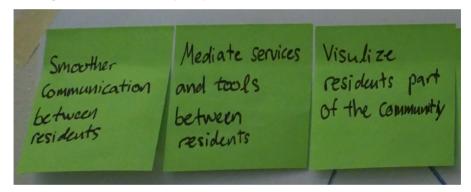
This social structure is believed, by many, to have created lone-liness among swedes. Statistics Sweden, the Swedish statistical bureau, note that there are 300 000 people in Sweden that are lonely (Statistiska centralbyrån, 2015). The residents of an apartment building are all individualistic people but also a part of a collective of common interests. Sadly, many residents are today strangers to their neighbours (Documentary: The Swedish theory of love. 2015).





Brainstorming

After the secondary research was completed, a brainstorming session was held to explore possible ideas.



Of the possible concept ideas, the conclusion was reached that a device to enable and promote communication and give residents knowledge about each other had the most potential, when compared to the brief.

Visulize when Care for the people are mutual environhome Ment Spaces

Experiments

Through experimentations in an apartment building, an important observation was made. This observation proved Cecilia Henning's point regarding the preferred way of communicating with neighbours - through notes. With the projects goal of encouraging interaction, experimentation took place to see if there was room to encourage more communication.

The experimentation was formed through putting up a piece of paper with an open-ended question, such as "what is the best with your home" and providing a pen, to see if people would interact and contribute.

At first, the experiment didn't get any reaction, but after a while, more people started to contribute answers and notes. By observing people participating it became evident that the reason behind the participation was because the experiment had been positioned in a hallway where people had to wait for a few moments, and thereby had some spare time to involve themselves in the experiment.

This reinforced the need to proceed with more experiments, to explore opportunities where people had spare time to contribute and communicate.

With this knowledge, an investigation was made with the aim of discovering opportunities where residents had a spare moment. The analysis exposed moments when a resident's movement stops, whilst accessing the building.

In most apartment buildings, there is a need to use a code machine or keys to access the building from the public environment. This step could be repeated if the residents need to access a shared yard first to then access their building. This can be identified as the first opportunity.

The residents then use either a staircase or an elevator to reach the desired floor where they live. When using the elevator or the staircase the residents often have a few moments before reaching the desired floor. The last opportunity is when a resident uses their keys to open their apartment door. På före kommen anledning! Var snåll kontrollera att dörren ogre ordentligt i lås. 4.11.-09 Styrelsen Kan någon vinga mij så jog kan hämte min tætt





From this observation, experimentation was carried out in the elevator by again placing a paper with a question and a pen to see if the residents wanted to contribute. The purpose of the experiment was to investigate if the residents would like to contribute with an answer to the question when they had a spare moment whilst stood in the lift.

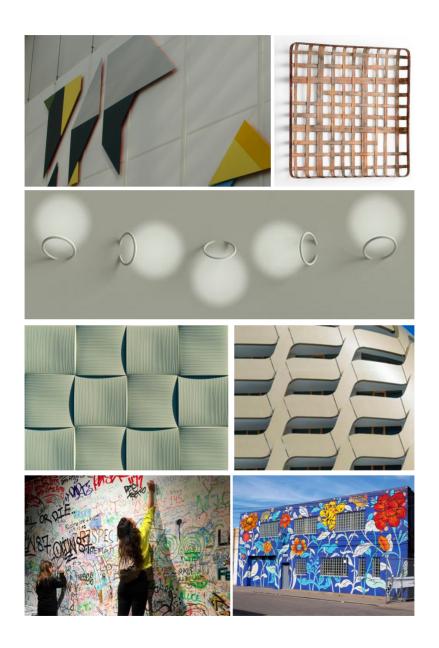
When provided with the opportunity to contribute and add their personal touch to the shared space, a few residents took the chance and it seemed that people used it to communicate to the people they knew in the house.

The conclusions from the experiments and the added research showed an opportunity to add a service where the residents could exchange information or just add a personal expression to the shared space.

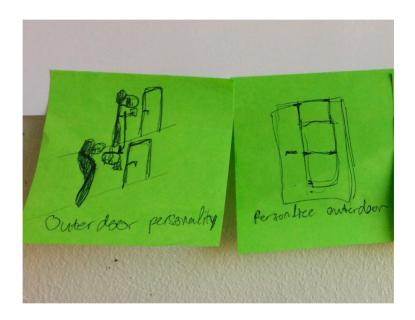
Visualisation

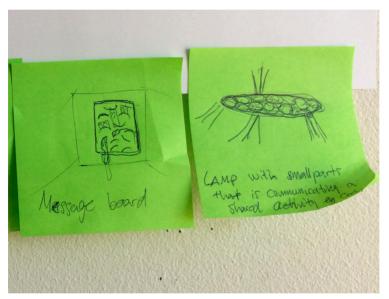
To get a visual image of how the end result should appear, a mood board was made to envision the required atmosphere from the service.





Ideas





With the decision to focus the project around residents sharing information and knowledge, a second brainstormed was conducted. Through the brainstorming four directional ideas were discovered, based on the opportunities found in the experiments.



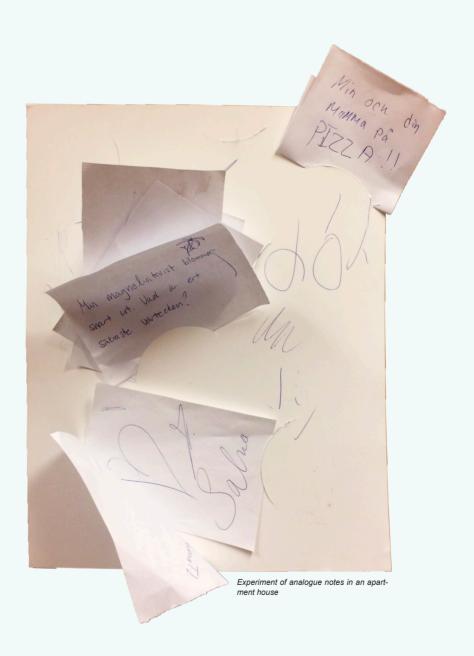






A continuation of the experiments was made by developing analogue approaches of communicating and leaving messages for residents. When attempted in an rental apartment house, a conclusion was reached that it was hard to establish communication in a house were people had no trust or knowledge of one another.

The tone of the conversation became harsh. This knowledge brought the question of how people interact when they are strangers to each other. What is the first steps of establishing a contact for strangers? This directed the project to aim at a solution where a resident could start smaller by initiating contact.

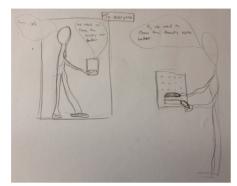


Project direction

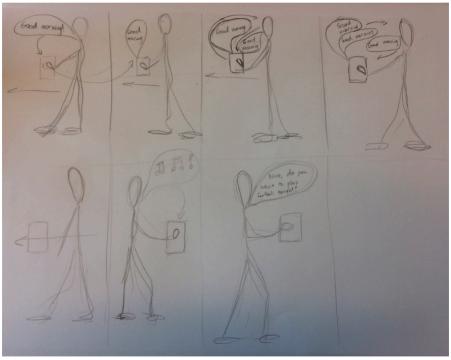
By going back to the brainstorming session, the idea of sharing an interaction between residents when leaving or entering the building was continued. After the previous attempt of sharing interaction in the elevator this idea was evaluated to have a better potential.



Iterations







To finalize the concept, ideations were made of how the product could function. The iteration process resulted in four different concepts.

Ideations



Information

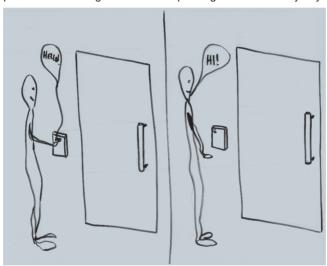
The machine can record private and group messages so residents can easily communicate within the building. The residents can highlight problematic situations and use the machine for social invitations. The machine gives the opportunity to send the messages private to selected recipients or publicly to the whole apartment building with all its residents.

The machine is placed inside the building in the entrance hall just after using your main tag or key to get into the building. Each residents key can unlock the messages stored within the machine.

Bring it forward

A key tag message machine. You tap in to the building and a greeting message plays from the previous person. You answer the greeting and your greeting plays to the next person.

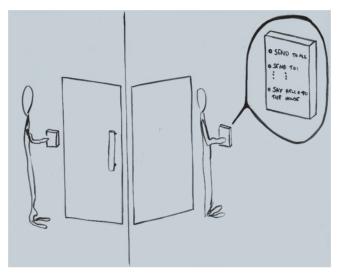
The solution would promote giving another resident a personal greeting to maintain an atmosphere in the apartment building that promotes knowledge about who is passing in and out every day.



Greeting and the porter at the door

In this scenario you would access the building with the key tag and record a greeting to one part of the machine that will give the greeting to the next person. When the resident has moved through the door, the second part of the message porter would be accessible to record messages between residents and provide opportunities to plan for social activities.





Welcome home

The residents would beep their key tag to get into the building. Once inside the building the resident has the option to activate the message machine with the key tag.

The message machine would have three functions:

- To send a message to the whole building about a problem or a social invitation. Each resident can hear the message once before it disappears.
- To send private messages to selected resident(s).
- To send a smile or a greeting message to the next person who walks inside the door

Evaluation

A test on a user group was made to clarify which or what functions had the most potential of the four iterations.

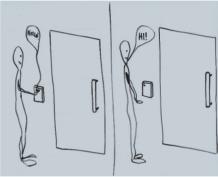
Information



"A digital message board, is the individual/ "Nice feature, creates a human touch and a private message function necessary?"

tened to?"

Bring it forward



spontaneity to interacting."

"Will the machine be ignored and never lis- "Annoying that people on the outside of the building hears the greeting."

Greeting and the porter at the door



"Not clear when dividing the functions to two "Nice to have it indoor, don't have to share different machines."

Welcome home



anything in public"

"Stigma if the house can hear that you are recording a message complaining."

"Might be ignored and only used by the people that looks after the house"

"Losing the effect of the greeting function that is spontaneous."

With the feedback provided, the decision was made to continue with the iteration "Bring it forward". There was still a desire to continue the development of the service functioning as a provider for messages between residents.

Functions

When a resident utilizes the key tag to access the building, it triggers a sensor and when entering the building the spontaneous message is played. After being played, the resident entering the building needs to record a spontaneous message of their own for the next person.

After entering the door, the resident can also choose to utilize the message functions by listening to messages or recording a message for the residents. These functions act as a message board.

The messages are played once and then deleted.

How long is the message available?

Differentiate group and individual

Skip messages? Repeat?

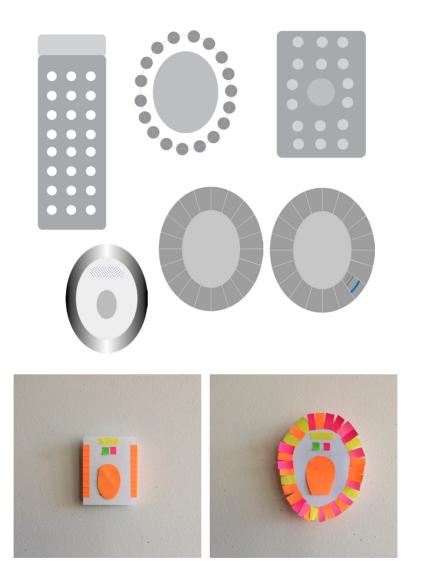
Delete?

Record / Play

Iterations II



Sketches and iterations of how the product could work and look were made. The design should be intuitive to understand and fulfil a purpose for the residents.



Evaluation II

After reflecting on the iterations and functionality of the product, a decision was made to simplify the purpose and focus on the main function. The main focus being: establishing knowledge of other people in an apartment house for residents.

With this direction, the functions of the service needed to be pinned down to clarify how the device should work so the outer design could be made. To determine the function a user story was made.

Function

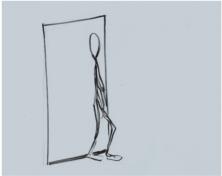
User story



- A resident arrives home and presents their - A greeting is then played from the machine apartment building.

key tag to unlock the main door into the from the previous person that entered the building.

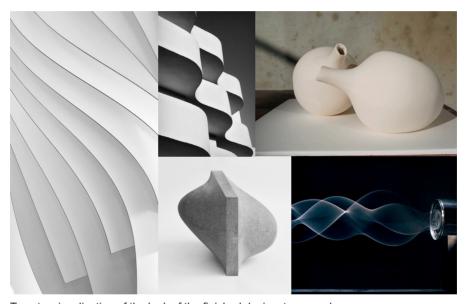




records a message to the next person.

- After hearing the message, the machine - The person then accesses the building.

Moodboards



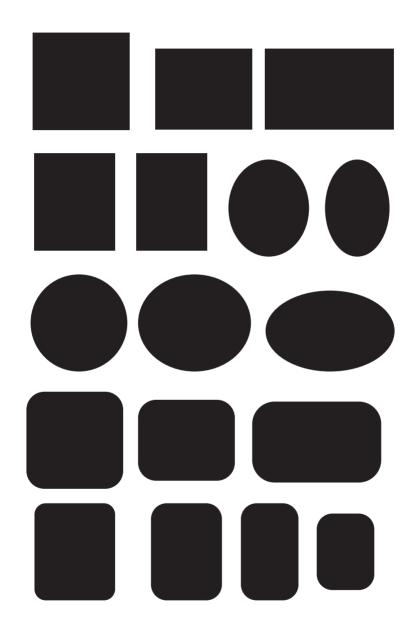
To get a visualization of the look of the finished device, two mood boards were made. The left illustrates the feeling of the overall form. The right one visualizes how the details and function should relate to the user. The general form should be organic to emphasise a human form, and the sensation of using the device should relay safety and familiarity.



Form

Iterations

With the starting point of comparing existing forms of similar devices, a selection of quick 2D forms were made. This gave an overall view of possible proportions relating to how the general form could be. Of the forms, a decision was made to continue with a more conservative look, opposed to an experimental one, to signal familiarity to the user.

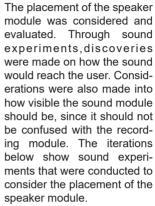




The next step was to look at more refined forms. Form explorations in clay were made to give alternative expressions. At this point contact was made with an electrical engineer to determine how big the device needed to be for it to function correctly. The hardware needed for the device would be of minimal size and therefore this would not restrain the device's proportions.













After the clay prototypes and experimentations, the prototyping phase continued in paper. A user test was conducted to perceive how the user interacted with each form. After this the most promising form was selected and the exact measurements were set for prototyping in CAD.

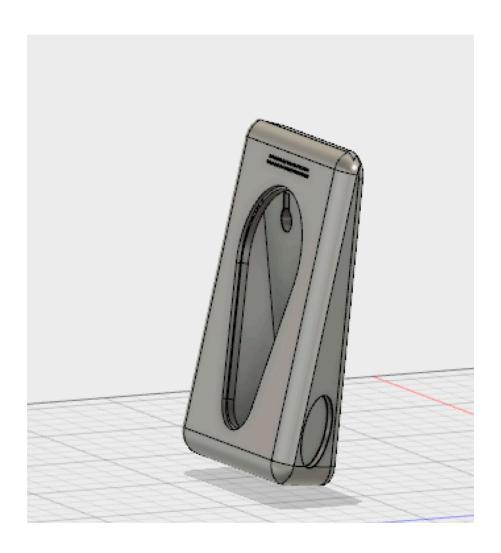




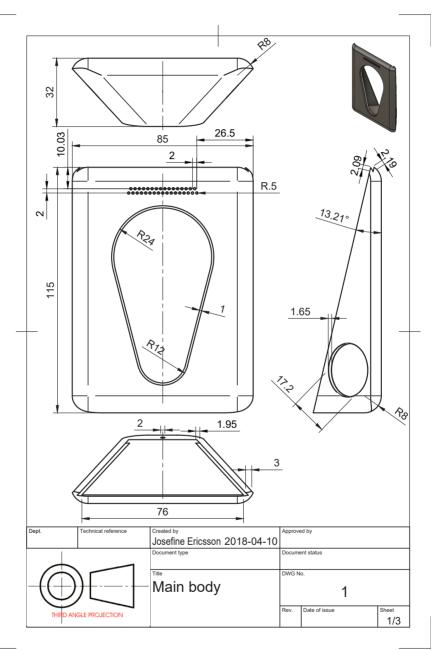
Realisation

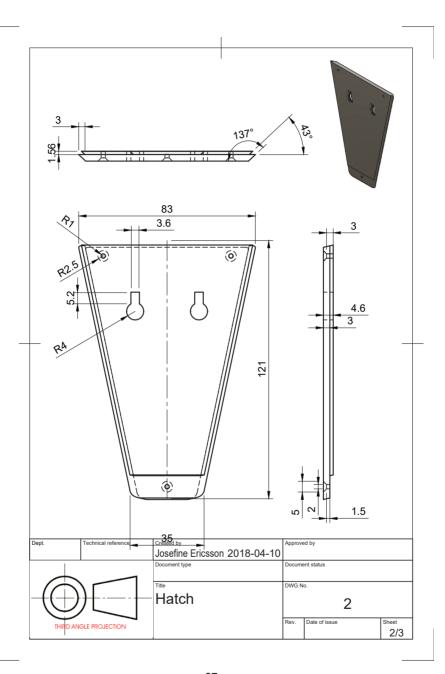
The form chosen had the sound module at the back of the device to protect the hardware, and to not confuse with usage of the recording module. The form is angled at the back to enable the sound to bounce to the user. The microphone is placed near the top of the machine to make the access as easy as possible and the least awkward. In the middle of the device is an area designed to activate the key tag. This can alternatively be changed to a key pad depending on the apartment house. This area would have a light signal behind it to indicate each step of the process to the residents

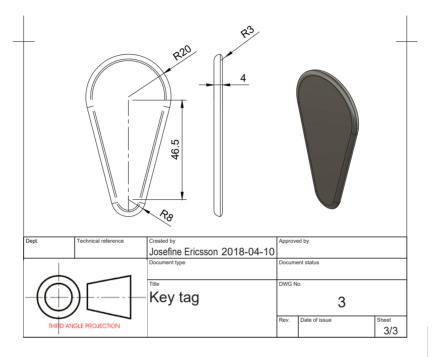
When designing the key tag and the form of the key tag area, market research was conducted to see the most used form for this purpose. The symbol and key tag itself should associate with the user to make the semantics of the device easy to understand. After some small changes in CAD with regards to the angles and radius of the curves, the form was ready to be develop into a final prototype.



Technical drawings







When the final form had been decided, technical drawings were made to communicate the design for production. The form of the final device was complicated due to the various angles and it was decided that the best way to make it was through 3D printing. Still, the technical drawings provide external manufacturers with all that is required to be able to produce it at scale.

After the 3D printing, the final look of the prototype was finished through assembling the parts together and painting.

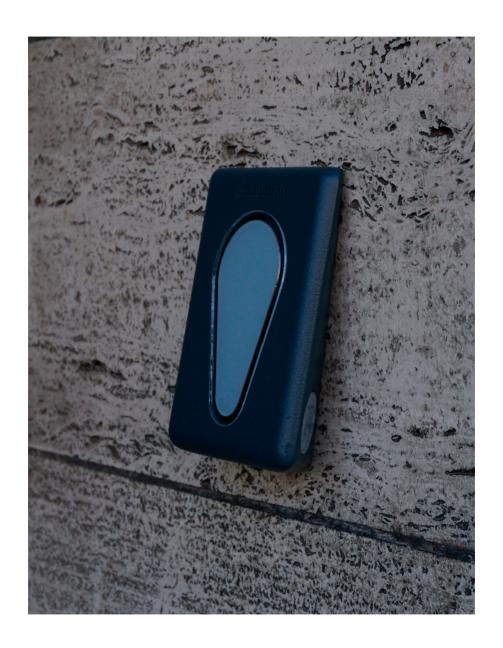






Final product: Portier

The final product is a key message device, named Portier. It allows the residents in an apartment building to form loose bonds with other residents without jeopardizing the individual's identity. As a bonus, it acts as a discouragement towards possible burglars. Portier allows the residents to have a personalized greeting when arriving home and acts as a conversation starter for residents









Functions

To activate the key device a resident is required to present their key tag (or alternatively a code). The machine will light up to signal that it is active and play the stored message from the last resident

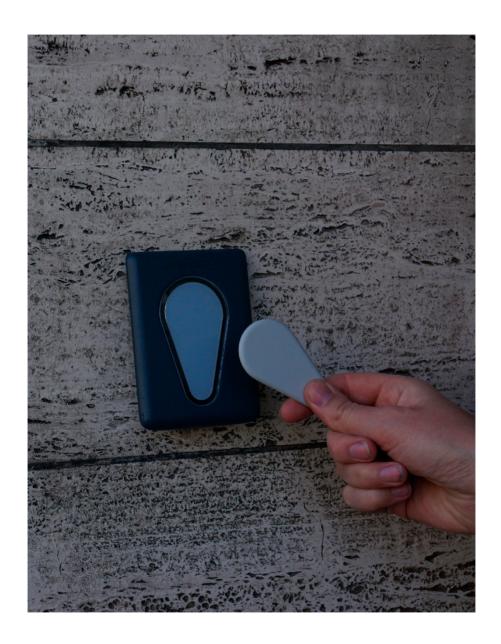
After the message has been played the light will change to yellow to signal that it's time to record something for the next person.

And when the message is recorded the light will shift to green and the door will be unlocked.



The final look of the product.

Reflections



This project has had challenges, such as establishing confinements of the brief, prioritising the stages of the process and meeting the deadline of the given project time. This was especially hard due to the complex nature of the chosen topic being a social issue. This gave the insight that broad topics are great to expose a lot of possible directions in a project but that there is a need to have established confinements to be able to drive the project forward and meet the desired deadlines.

The topic itself is a current existing problem that could have many solutions in different areas of study. When discussing the issue through a design process it opens up many creative approaches that could be overlooked by other fields of studies. This shows a strength of what a creative design process can bring to the society in forms of discussion and awareness.

The end result is an interesting comment on todays issues and integrational problem in Sweden that could be applicable on other western countries. The final outcome could still be refined further to be more including and approachable without being to intimidating. What this project is proud to achieve is an occasion to discuss a social health problem existing in society.

To conclude there is still opportunities to further perfect the process of a design project of this nature. Still the resulted outcome of the process made the project worth conducting.

I want to thank you for taking the time and reading my thesis. I want to direct a special thank you to Mike Gent, who have supported and helped me realising this project. And a thank you to the professors and teachers at the department of Industrial design for guiding and educating me throughout my bachelor.

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